

# SEQUENCE LISTING

<110> Busfield, S.  
 Villeval, J.  
 Jandrot-Perrus, M.  
 Vainchenker, W.  
 Gill, D.  
 Qian, M.  
 Kingsbury, G.

<120> GLYCOPROTEIN VI AND USES THEREOF

<130> 7853-211

<150> 09/503,387

<151> 2/14/00

<150> 09/454,824

<151> 12/6/99

<150> 09/345,468

<151> 6/30/99

<160> 72

<170> FastSEQ for Windows Version 3.0

<210> 1

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<212> DNA

<213> Homo sapiens

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<212> PRT
<213> Homo sapiens
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Gly	Val	Asp	Leu	Tyr	Arg	Leu	Glu	Lys	Leu	Ser	Ser	Ser	Arg	Tyr	Gln	
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Asp	Gln	Ala	Val	Leu	Phe	Ile	Pro	Ala	Met	Lys	Arg	Ser	Leu	Ala	Gly	
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Arg	Tyr	Arg	Cys	Ser	Tyr	Gln	Asn	Gly	Ser	Leu	Trp	Ser	Leu	Pro	Ser	
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Ser	Ala	Gln	Pro	Gly	Pro	Ala	Val	Ser	Ser	Gly	Gly	Asp	Val	Thr	Leu	
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Gln	Cys	Gln	Thr	Arg	Tyr	Gly	Phe	Asp	Gln	Phe	Ala	Leu	Tyr	Lys	Glu	
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Phe	Pro	Ile	Ile	Thr	Val	Thr	Ala	Ala	His	Ser	Gly	Thr	Tyr	Arg	Cys	
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Tyr	Ser	Phe	Ser	Ser	Arg	Asp	Pro	Tyr	Leu	Trp	Ser	Ala	Pro	Ser	Asp	
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Pro	Leu	Glu	Leu	Val	Val	Thr	Gly	Thr	Ser	Val	Thr	Pro	Ser	Arg	Leu	
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Pro	Thr	Glu	Pro	Pro	Ser	Ser	Val	Ala	Glu	Phe	Ser	Glu	Ala	Thr	Ala
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Arg	Ser	Ile	Thr	Thr	Ser	Pro	Lys	Glu	Ser	Asp	Ser	Pro	Ala	Gly	Pro
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Ala	Arg	Gln	Tyr	Tyr	Thr	Lys	Gly	Asn	Leu	Val	Arg	Ile	Cys	Leu	Gly
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Ala	Val	Ile	Leu	Ile	Ile	Leu	Ala	Gly	Phe	Leu	Ala	Glu	Asp	Trp	His
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Ser	Arg	Arg	Lys	Arg	Leu	Arg	His	Arg	Gly	Arg	Ala	Val	Gln	Arg	Pro
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<213> Homo sapiens
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Phe Leu Ala

<400> 9

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 35 40 45  
 Asp Gln Ala Val Leu Phe Ile Pro Ala Met Lys Arg Ser Leu Ala Gly  
 50 55 60  
 Arg Tyr Arg Cys Ser Tyr Gln Asn Gly Ser Leu Trp Ser Leu Pro Ser  
 65 70 75 80  
 Asp Gln Leu Glu Leu Val Ala Thr Gly Val Phe Ala Lys Pro Ser Leu  
 85 90 95  
 Ser Ala Gln Pro Gly Pro Ala Val Ser Ser Gly Gly Asp Val Thr Leu  
 100 105 110  
 Gln Cys Gln Thr Arg Tyr Gly Phe Asp Gln Phe Ala Leu Tyr Lys Glu  
 115 120 125  
 Gly Asp Pro Ala Pro Tyr Lys Asn Pro Glu Arg Trp Tyr Arg Ala Ser  
 130 135 140  
 Phe Pro Ile Ile Thr Val Thr Ala Ala His Ser Gly Thr Tyr Arg Cys  
 145 150 155 160  
 Tyr Ser Phe Ser Ser Arg Asp Pro Tyr Leu Trp Ser Ala Pro Ser Asp  
 165 170 175  
 Pro Leu Glu Leu Val Val Thr Gly Thr Ser Val Thr Pro Ser Arg Leu  
 180 185 190  
 Pro Thr Glu Pro Pro Ser Ser Val Ala Glu Phe Ser Glu Ala Thr Ala  
 195 200 205  
 Glu Leu Thr Val Ser Phe Thr Asn Lys Val Phe Thr Thr Glu Thr Ser  
 210 215 220  
 Arg Ser Ile Thr Thr Ser Pro Lys Glu Ser Asp Ser Pro Ala Gly Pro  
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 <212> PRT  
 <213> Homo sapiens

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 <212> DNA  
 <213> Homo sapiens

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 caccctctca gccctgccca gccctgtggt ggccctcagg gggaatatga ccctccgatg 480  
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<212> PRT
<213> Homo sapiens

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35 40 45
Cys Gln Gly Ser Leu Glu Ala Gln Glu Tyr Arg Leu Asp Lys Glu Gly
50 55 60
Ser Pro Glu Pro Leu Asp Arg Asn Asn Pro Leu Glu Pro Lys Asn Lys
65 70 75 80
Ala Arg Phe Ser Ile Pro Ser Met Thr Glu His His Ala Gly Arg Tyr
85 90 95
Arg Cys His Tyr Tyr Ser Ser Ala Gly Trp Ser Glu Pro Ser Asp Pro
100 105 110
Leu Glu Leu Val Met Thr Gly Phe Tyr Asn Lys Pro Thr Leu Ser Ala
115 120 125
Leu Pro Ser Pro Val Val Ala Ser Gly Gly Asn Met Thr Leu Arg Cys
130 135 140
Gly Ser Gln Lys Gly Tyr His His Phe Val Leu Met Lys Glu Gly Glu
145 150 155 160
His Gln Leu Pro Arg Thr Leu Asp Ser Gln Gln Leu His Ser Gly Gly
165 170 175
Phe Gln Ala Leu Phe Pro Val Gly Pro Val Asn Pro Ser His Arg Trp
180 185 190
Arg Phe Thr Cys Tyr Tyr Tyr Tyr Met Asn Thr Pro Gln Val Trp Ser
195 200 205
His Pro Ser Asp Pro Leu Glu Ile Leu Pro Ser Gly Val Ser Arg Lys
210 215 220

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 Tyr Lys Glu Gly Glu Arg Asp Phe Leu Gln Arg Pro Gly Gln Gln Pro  
 260 265 270  
 Gln Ala Gly Leu Ser Gln Ala Asn Phe Thr Leu Gly Pro Val Ser Pro  
 275 280 285  
 Ser His Gly Gly Gln Tyr Arg Cys Tyr Gly Ala His Asn Leu Ser Ser  
 290 295 300  
 Glu Trp Ser Ala Pro Ser Asp Pro Leu Asn Ile Leu Met Ala Gly Gln  
 305 310 315 320  
 Ile Tyr Asp Thr Val Ser Leu Ser Ala Gln Pro Gly Pro Thr Val Ala  
 325 330 335  
 Ser Gly Glu Asn Val Thr Leu Leu Cys Gln Ser Trp Trp Gln Phe Asp  
 340 345 350  
 Thr Phe Leu Leu Thr Lys Glu Gly Ala Ala His Pro Pro Leu Arg Leu  
 355 360 365  
 Arg Ser Met Tyr Gly Ala His Lys Tyr Gln Ala Glu Phe Pro Met Ser  
 370 375 380  
 Pro Val Thr Ser Ala His Ala Gly Thr Tyr Arg Cys Tyr Gly Ser Tyr  
 385 390 395 400  
 Ser Ser Asn Pro His Leu Leu Ser Phe Pro Ser Glu Pro Leu Glu Leu  
 405 410 415  
 Met Val Ser Gly His Ser Gly Gly Ser Ser Leu Pro Pro Thr Gly Pro  
 420 425 430  
 Pro Ser Thr Pro Gly Leu Gly Arg Tyr Leu Glu Val Leu Ile Gly Val  
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 Ser Val Ala Phe Val Leu Leu Leu Phe Leu Leu Phe Leu Leu Leu  
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 465 470 475 480  
 Asp Phe Gln Arg Pro Ala Gly Ala Ala Glu Thr Glu Pro Lys Asp Arg  
 485 490 495  
 Gly Leu Leu Arg Arg Ser Ser Pro Ala Ala Asp Val Gln Glu Glu Asn  
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 Leu Tyr Ala Ala Val Lys Asp Thr Gln Ser Glu Asp Arg Val Glu Leu  
 515 520 525  
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 Pro Val Lys His Ser Ser Pro Arg Arg Glu Met Ala Ser Pro Pro Ser  
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 Ser Leu Ser Gly Glu Phe Leu Asp Thr Lys Asp Arg Gln Val Glu Glu  
 565 570 575  
 Asp Arg Gln Met Asp Thr Glu Ala Ala Ser Glu Ala Ser Gln Asp  
 580 585 590  
 Val Thr Tyr Ala Gln Leu His Ser Leu Thr Leu Arg Arg Lys Ala Thr  
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<210> 13  
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 <212> PRT  
 <213> Homo sapiens

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<211> 1163
<212> DNA
<213> Mus musculus
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<213> Mus musculus

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 $\langle 211 \rangle$  313

<212> PRT

<213> Mus musculus



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 Ala Gln Pro Ser Ser Leu Val Pro Leu Gly Gln Ser Val Ile Leu Arg  
 35 40 45  
 Cys Gln Gly Pro Pro Asp Val Asp Leu Tyr Arg Leu Glu Lys Leu Lys  
 50 55 60  
 Pro Glu Lys Tyr Glu Asp Gln Asp Phe Leu Phe Ile Pro Thr Met Glu  
 65 70 75 80  
 Arg Ser Asn Ala Gly Arg Tyr Arg Cys Ser Tyr Gln Asn Gly Ser His  
 85 90 95  
 Trp Ser Leu Pro Ser Asp Gln Leu Glu Leu Ile Ala Thr Gly Val Tyr  
 100 105 110  
 Ala Lys Pro Ser Leu Ser Ala His Pro Ser Ser Ala Val Pro Gln Gly  
 115 120 125  
 Arg Asp Val Thr Leu Lys Cys Gln Ser Pro Tyr Ser Phe Asp Glu Phe  
 130 135 140  
 Val Leu Tyr Lys Glu Gly Asp Thr Gly Pro Tyr Lys Arg Pro Glu Lys  
 145 150 155 160  
 Trp Tyr Arg Ala Asn Phe Pro Ile Ile Thr Val Thr Ala Ala His Ser  
 165 170 175  
 Gly Thr Tyr Arg Cys Tyr Ser Phe Ser Ser Ser Ser Pro Tyr Leu Trp  
 180 185 190  
 Ser Ala Pro Ser Asp Pro Leu Val Leu Val Val Thr Gly Leu Ser Ala  
 195 200 205  
 Thr Pro Ser Gln Val Pro Thr Glu Glu Ser Phe Pro Val Thr Glu Ser  
 210 215 220  
 Ser Arg Arg Pro Ser Ile Leu Pro Thr Asn Lys Ile Ser Thr Thr Glu  
 225 230 235 240  
 Lys Pro Met Asn Ile Thr Ala Ser Pro Glu Gly Leu Ser Pro Pro Ile  
 245 250 255  
 Gly Phe Ala His Gln His Tyr Ala Lys Gly Asn Leu Val Arg Ile Cys  
 260 265 270  
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 305 310

<210> 17  
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 <213> Mus musculus

<400> 17  
 Met Ser Pro Ala Ser Pro Thr Phe Phe Cys Ile Gly Leu Cys Val Leu  
 1 5 10 15  
 Gln Val Ile Gln Thr  
 20

<210> 18  
 <211> 292  
 <212> PRT  
 <213> Mus musculus

<400> 18  
 Gln Ser Gly Pro Leu Pro Lys Pro Ser Leu Gln Ala Gln Pro Ser Ser  
 1 5 10 15

[illegible]

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<210> 19
<211> 267
<212> PRT
<213> Mus musculus
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<400> 19															
Met 1	Ser	Pro	Ala	Ser 5	Pro	Thr	Phe	Phe	Cys 10	Ile	Gly	Leu	Cys 15	Val	Leu
Gln	Val	Ile	Gln 20	Thr	Gln	Ser	Gly	Pro 25	Leu	Pro	Lys	Pro	Ser 30	Leu	Gln
Ala	Gln	Pro 35	Ser	Ser	Leu	Val	Pro 40	Leu	Gly	Gln	Ser	Val 45	Ile	Leu	Arg
Cys	Gln	Gly 50	Pro	Pro	Asp 55	Val	Asp	Leu	Tyr	Arg	Leu 60	Glu	Lys	Leu	Lys
Pro 65	Glu	Lys	Tyr	Glu 70	Asp	Gln	Asp	Phe	Leu 75	Phe	Ile	Pro	Thr	Met	Glu 80
Arg	Ser	Asn	Ala 85	Gly	Arg	Tyr	Arg	Cys 90	Ser	Tyr	Gln	Asn	Gly 95	Ser	His
Trp	Ser	Leu	Pro 100	Ser	Asp	Gln	Leu	Glu 105	Leu	Ile	Ala	Thr	Gly 110	Val	Tyr
Ala	Lys	Pro 115	Ser	Leu	Ser	Ala	His 120	Pro	Ser	Ser	Ala	Val 125	Pro	Gln	Gly
Arg	Asp 130	Val	Thr	Leu	Lys	Cys 135	Gln	Ser	Pro	Tyr	Ser 140	Phe	Asp	Glu	Phe

Val 145	Leu	Tyr	Lys	Glu	Gly 150	Asp	Thr	Gly	Pro	Tyr 155	Lys	Arg	Pro	Glu	Lys 160
Trp	Tyr	Arg	Ala	Asn 165	Phe	Pro	Ile	Ile	Thr 170	Val	Thr	Ala	Ala	His 175	Ser
Gly	Thr	Tyr	Arg 180	Cys	Tyr	Ser	Phe	Ser 185	Ser	Ser	Ser	Pro	Tyr 190	Leu	Trp
Ser	Ala	Pro	Ser	Asp	Pro	Leu	Val 200	Leu	Val	Val	Thr 205	Gly	Leu	Ser	Ala
Thr	Pro 210	Ser	Gln	Val	Pro	Thr 215	Glu	Glu	Ser	Phe	Pro 220	Val	Thr	Glu	Ser
Ser 225	Arg	Arg	Pro	Ser	Ile 230	Leu	Pro	Thr	Asn	Lys 235	Ile	Ser	Thr	Thr	Glu 240
Lys	Pro	Met	Asn 245	Ile	Thr	Ala	Ser	Pro	Glu 250	Gly	Leu	Ser	Pro	Pro 255	Ile
Gly	Phe	Ala	His 260	Gln	His	Tyr	Ala	Lys 265	Gly	Asn					

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<210> 20
<211> 19
<212> PRT
<213> Mus musculus
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      <400> 20
Leu Val Arg Ile Cys Leu Gly Ala Thr Ile Ile Ile Ile Leu Leu Gly
 1             5             10             15
Leu Leu Ala

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<210> 21
<211> 27
<212> PRT
<213> Mus musculus
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<400> 21  
Glu Asp Trp His Ser Arg Lys Lys Cys Leu Gln His Arg Met Arg Ala  
1 5 10 15  
Leu Gln Arg Pro Leu Pro Pro Leu Pro Leu Ala  
20 25

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<210> 22
<211> 41
<212> PRT
<213> Mus musculus
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<400> 22  
Cys Gln Gly Pro Pro Asp Val Asp Leu Tyr Arg Leu Glu Lys Leu Lys  
1 5 10 15  
Pro Glu Lys Tyr Glu Asp Gln Asp Phe Leu Phe Ile Pro Thr Met Glu  
20 25 30  
Arg Ser Asn Ala Gly Arg Tyr Arg Cys  
35 40

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<210> 23
<211> 47
<212> PRT
<213> Mus musculus
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				<400>	23											
Cys	Gln	Ser	Pro	Tyr	Ser	Phe	Asp	Glu	Phe	Val	Leu	Tyr	Lys	Glu	Gly	
1				5					10					15		
Asp	Thr	Gly	Pro	Tyr	Lys	Arg	Pro	Glu	Lys	Trp	Tyr	Arg	Ala	Asn	Phe	
			20					25					30			

Pro Ile Ile Thr Val Thr Ala Ala His Ser Gly Thr Tyr Arg Cys  
 35 40 45

<210> 24  
 <211> 1896  
 <212> DNA  
 <213> Homo sapiens

<400> 24  
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 gtgcaggcag ggcccttccc caaaccacc ctctgggctg agccaggctc tgtgatcagc 120  
 tgggggagcc ccgtgaccat ctggtgtcag gggagcctgg aggccaggga gtaccgactg 180  
 gataaagagg gaagcccaga gcccttggac agaaataacc cactggaacc caagaacaag 240  
 gccagattct ccattccatc catgacagag caccatgcgg ggagataacc ctgccactat 300  
 tacagctctg caggctggtc agagcccagc gaccccttgg agctggtgat gacaggattc 360  
 tacaacaaac ccacctctc agccctgccc agccctgtgg tggcctcagg ggggaatatg 420  
 accctccgat gtggctcaca gaagggatat caccattttg ttctgatgaa ggaaggagaa 480  
 caccagctcc cccggaccct ggactcacag cagctccaca gtggggggtt ccaggccctg 540  
 ttccctgtgg gccccgtgaa cccagccac aggtggaggt tcacatgcta ttactattat 600  
 atgaacaccc cccagggtgtg gtcccacccc agtgaccccc tggagattct gccctcaggc 660  
 gtgtctagga agccctccct cctgaccctg cagggccctg tccctggccc tgggcagagc 720  
 ctgacctcc agtgtggctc tgatgtcggc tacgacagat ttgttctgta taaggagggg 780  
 gaacgtgact tctccagcg ccctggccag cagccccagg ctgggctctc ccaggccaac 840  
 ttacccttg gccctgtgag cccctccac gggggccagt acagggtgcta tgggtgcacac 900  
 aacctctct ccgagtgtgc ggccccagc gacccctga acatcctgat ggcaggacag 960  
 atctatgaca ccgtctccct gtcagcacag ccgggcccc cagtggcctc aggagagaac 1020  
 gtgaccctgc tgtgtcagtc atggtggcag tttgacactt tccttctgac caaagaaggg 1080  
 gcagcccatc cccactgcg tctgagatca atgtacggag ctcataagta ccaggctgaa 1140  
 ttcccatga gtcctgtgac ctacagccac gcggggacct acagggtgcta cggctcatac 1200  
 agtccaacc cccacctgct gtctttcccc agtgagcccc tggaaactcat ggtctcagga 1260  
 cactctggag gctccagcct cccaccaca gggccgccc ccacacctgg tctgggaaga 1320  
 tacctggagg ttttgattgg ggtctcggtg gccttcgtcc tgetgctctt cctcctctc 1380  
 ttctcctcc tccgacgtca gcgtcacagc aaacacagga catctgacca gagaaagact 1440  
 gatttccagc gtctgacag ggctgcggag acagagccca aggacagggg cctgctgagg 1500  
 aggtccagcc cagctgctga cgtccaggaa gaaaacctct atgctgccgt gaaggacaca 1560  
 cagtctgagg acagggtgga gctggacagt cagagccac acgatgaaga cccccaggca 1620  
 gtgacgtatg ccccggtgaa aactccagt cctaggagag aaatggcctc tcctccctcc 1680  
 tcaactgtct ggggaattcct ggacacaaag gacagacagg tggaaagagga caggcagatg 1740  
 gacactgagg ctgctgcac tgaagcctcc caggatgtga cctacgcca gctgcacagc 1800  
 ttgacctta gacggaaggc aactgagcct cctccatccc aggaagggga acctccagct 1860  
 gagccagca tctacgccac tctggccatc cactag 1896

<210> 25  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> forward primer

<400> 25  
 cagcctcacc cactttcttc 20

<210> 26  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> reverse primer

<400> 26

ccacaagcac tagagggtca

20

<210> 27  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> sense primer

<400> 27  
ttctgtcttg ggctgtgtct g

21

<210> 28  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> anti-sense primer

<400> 28  
cccgccagga ttattaggat c

21

<210> 29  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> sense primer

<400> 29  
cctgaagctg acagcattcg g

21

<210> 30  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> anti-sense primer

<400> 30  
ctcctagagc tacctgtgga g

21

<210> 31  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> forward primer

<400> 31  
ctgtagctgt tttcagacac acc

23

<210> 32  
<211> 21  
<212> DNA  
<213> Artificial Sequence

21

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<210> 33
<211> 1017
<212> DNA
<213> Homo sapiens
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<400> 33						
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cagagtggac	cgctcccaa	gcctccctc	caggttctgc	ccagctccct	ggtgccctg	120
gagaagccag	tgacctccg	gtgccaggga	cctccgggcg	tggacctgta	ccgcctggag	180
aagctgagtt	ccagcaggta	ccaggatcag	gcagtcctct	tcctcccgta	catgaagaga	240
agctctggct	gacgctaccg	ctgctcctac	cagaacggaa	gcctctggtc	cctgcccagc	300
gaccagctgg	agctcgttgc	cacgggagtt	tttgccaaac	cctcgctctc	agcccagccc	360
ggcccggcgg	tgtcgtcagg	aggggacgta	accctacagt	gtcagactcg	gtatggcttt	420
gaccaatttg	ctctgtacaa	ggaaggggac	cctgcgccct	acaagaatcc	cgagagatgg	480
taccgggcta	gtttcccat	catcacggtg	accgccgcc	acagcggaac	ctaccgatgc	540
taagacttct	ccagcaggga	ccatacctg	tggtcggccc	ccagcggacc	cctggagctt	600
tggtctcacg	gaacctctgt	gacccccagc	cggttaccaa	cagaaccacc	ttcctcggtg	660
gcagaattct	cagaagccac	cgctgaactg	accgtctcat	tcacaaacaa	agtcttcaca	720
actgagactt	ctaggagtat	caccaccagt	caaaggagt	cagactctcc	agctggtcct	780
gcccgccagt	actacaccaa	gggcaacctg	gtccggatat	gcctcggggc	tgtgatccta	840
ataatcctgg	cgggggtttct	ggcagaggac	tggcacagcc	ggaggaaagc	cctgcggcac	900
aggggcaggg	ctgtgcagag	gcgcgttccg	cccctgcgcg	ccctcccgca	gaccgcgaaa	960
tcacacgggg	gtcaggatqg	aqgcgcagag	gatgttcaca	gccgcggggt	atgttca	1017

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<210> 34
<211> 339
<212> PRT
<213> Homo sapiens
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			<400>	34											
Met 1	Ser	Pro	Ser	Pro 5	Thr	Ala	Leu	Phe	Cys 10	Leu	Gly	Leu	Cys 15	Leu	Gly
Arg	Val	Pro	Ala 20	Gln	Ser	Gly	Pro	Leu 25	Pro	Lys	Pro	Ser	Leu 30	Gln	Val
Leu	Pro	Ser 35	Ser	Leu	Val	Pro	Leu 40	Glu	Lys	Pro	Val	Thr 45	Leu	Arg	Cys
Gln	Gly 50	Pro	Pro	Gly	Val	Asp 55	Leu	Tyr	Arg	Leu	Glu 60	Lys	Leu	Ser	Ser
Ser 65	Arg	Tyr	Gln	Asp 70	Gln	Ala	Val	Leu	Phe 75	Ile	Pro	Ala	Met	Lys	Arg
Ser	Leu	Ala	Gly	Arg 85	Tyr	Arg	Cys	Ser	Tyr 90	Gln	Asn	Gly	Ser	Leu 95	Trp
Ser	Leu	Pro	Ser 100	Asp	Gln	Leu	Glu	Leu 105	Val	Ala	Thr	Gly	Val 110	Phe	Ala
Lys	Pro	Ser 115	Leu	Ser	Ala	Gln	Pro 120	Gly	Pro	Ala	Val	Ser 125	Ser	Gly	Gly
Asp	Val 130	Thr	Leu	Gln	Cys	Gln 135	Thr	Arg	Tyr	Gly	Phe 140	Asp	Gln	Phe	Ala
Leu 145	Tyr	Lys	Glu	Gly 150	Asp	Pro	Ala	Pro	Tyr	Lys 155	Asn	Pro	Glu	Arg	Trp 160
Tyr	Arg	Ala	Ser	Phe 165	Pro	Ile	Ile	Thr	Val 170	Thr	Ala	Ala	His 175	Ser	Gly
Thr	Tyr	Arg	Cys 180	Tyr	Ser	Phe	Ser 185	Ser	Arg	Asp	Pro	Tyr	Leu 190	Trp	Ser
Ala	Pro	Ser 195	Asp	Pro	Leu	Glu	Leu 200	Val	Val	Thr	Gly	Thr 205	Ser	Val	Thr

Pro Ser Arg Leu Pro Thr Glu Pro Pro Ser Ser Val Ala Glu Phe Ser  
 210 215 220  
 Glu Ala Thr Ala Glu Leu Thr Val Ser Phe Thr Asn Lys Val Phe Thr  
 225 230 235 240  
 Thr Glu Thr Ser Arg Ser Ile Thr Thr Ser Pro Lys Glu Ser Asp Ser  
 245 250 255  
 Pro Ala Gly Pro Ala Arg Gln Tyr Tyr Thr Lys Gly Asn Leu Val Arg  
 260 265 270  
 Ile Cys Leu Gly Ala Val Ile Leu Ile Leu Ala Gly Phe Leu Ala  
 275 280 285  
 Glu Asp Trp His Ser Arg Arg Lys Arg Leu Arg His Arg Gly Arg Ala  
 290 295 300  
 Val Gln Arg Pro Leu Pro Pro Leu Pro Pro Leu Pro Gln Thr Arg Lys  
 305 310 315 320  
 Ser His Gly Gly Gln Asp Gly Gly Arg Gln Asp Val His Ser Arg Gly  
 325 330 335  
 Leu Cys Ser

<210> 35  
 <211> 1017  
 <212> DNA  
 <213> Homo sapiens

<400> 35  
 atgtctccat ccccgaccgc cctcttctgt cttgggctgt gtctggggcg tgtgccagcg 60  
 cagagtggac cgctcccaa gccctccctc caggctctgc ccagctccct ggtgccctg 120  
 gagaagccag tgacctccg gtgccaggga cctccgggcg tggacctgta ccgcctggag 180  
 aagctgagtt ccagcaggta ccaggatcag gtagtctct tcatcccggc catgaagaga 240  
 agtctggctg gacgctaccg ctgctcctac cagaacggaa gcctctggtc cctgcccagc 300  
 gaccagctgg agctcggtgc cacgggagtt tttgccaaac cctcgctctc agcccagccc 360  
 ggcccggcggtg tgtcgtcagg aggggacgta accctacagt gtcagactcg gtatggcttt 420  
 gaccaatttg ctctgtacaa ggaaggggac cctgcgcctt acaagaatcc cgagagatgg 480  
 taccgggcta gtttcccat catcacggtg accgccgcc acagcggaac ctaccgatgc 540  
 tacagtttct ccagcaggga cccatacctg tggtcggccc ccagcgaccc cctggagctt 600  
 gtggtcacag gaacctctgt gacccccagc cggttaccaa cagaaccacc ttcctcggtg 660  
 gcagaattct cagaagccac cgctgaactg accgtctcat tcacaaacaa agtcttcaca 720  
 actgagactt ctaggagtat caccaccagt ccaaaggagt cagactctcc agctggtcct 780  
 gcccgccagt actacaccaa gggcaacctg gtccggatat gcctcggggc tgtgatccta 840  
 ataactctgg cggggtttct ggcagaggac tggcacagcc ggaggaagcg cctgcggcac 900  
 aggggcaggg ctgtgcagag gccgcttcg cccctgccgc ccctcccgca gaccgggaaa 960  
 tcacacgggg gtcaggatgg aggccgacag gatgttcaca gccgcggggt atgttca 1017

<210> 36  
 <211> 339  
 <212> PRT  
 <213> Homo sapiens

<400> 36  
 Met Ser Pro Ser Pro Thr Ala Leu Phe Cys Leu Gly Leu Cys Leu Gly  
 1 5 10 15  
 Arg Val Pro Ala Gln Ser Gly Pro Leu Pro Lys Pro Ser Leu Gln Ala  
 20 25 30  
 Leu Pro Ser Ser Leu Val Pro Leu Glu Lys Pro Val Thr Leu Arg Cys  
 35 40 45  
 Gln Gly Pro Pro Gly Val Asp Leu Tyr Arg Leu Glu Lys Leu Ser Ser  
 50 55 60  
 Ser Arg Tyr Gln Asp Gln Val Val Leu Phe Ile Pro Ala Met Lys Arg  
 65 70 75 80  
 Ser Leu Ala Gly Arg Tyr Arg Cys Ser Tyr Gln Asn Gly Ser Leu Trp  
 85 90 95





<400> 38  
Met Ser Pro Ser Pro Thr Ala Leu Phe Cys Leu Gly Leu Cys Leu Gly  
1 5 10 15  
Arg Val Pro Ala Gln Ser Gly Pro Leu Pro Lys Pro Ser Leu Gln Ala  
20 25 30  
Leu Pro Ser Ser Leu Val Pro Leu Glu Lys Pro Val Thr Leu Arg Cys  
35 40 45  
Gln Gly Pro Pro Gly Val Asp Leu Tyr Arg Leu Glu Lys Leu Ser Ser  
50 55 60  
Ser Arg Tyr Gln Asp Gln Ala Val Leu Phe Ile Pro Ala Met Lys Arg  
65 70 75 80  
Ser Leu Ala Gly Arg Tyr Arg Cys Ser Tyr Gln Asn Gly Ser Leu Trp  
85 90 95  
Ser Leu Pro Ser Asp Gln Leu Glu Leu Val Ala Thr Gly Val Phe Ala  
100 105 110  
Lys Pro Ser Leu Ser Ala Gln Pro Gly Pro Ala Val Ser Ser Gly Gly  
115 120 125  
Asp Val Thr Leu Gln Cys Gln Thr Arg Tyr Gly Phe Asp Gln Phe Ala  
130 135 140  
Leu Tyr Lys Glu Gly Asp Pro Ala Pro Tyr Lys Asn Pro Glu Arg Trp  
145 150 155 160  
Tyr Arg Ala Ser Phe Pro Ile Ile Thr Ala Thr Ala Ala His Ser Gly  
165 170 175  
Thr Tyr Arg Cys Tyr Ser Phe Ser Ser Arg Asp Pro Tyr Leu Trp Ser  
180 185 190  
Ala Pro Ser Asp Pro Leu Glu Leu Val Val Thr Gly Thr Ser Val Thr  
195 200 205  
Pro Ser Arg Leu Pro Thr Glu Pro Pro Ser Ser Val Ala Glu Phe Ser  
210 215 220  
Glu Ala Thr Ala Glu Leu Thr Val Ser Phe Thr Asn Lys Val Phe Thr  
225 230 235 240  
Thr Glu Thr Ser Arg Ser Ile Thr Thr Ser Pro Lys Glu Ser Asp Ser  
245 250 255  
Pro Ala Gly Pro Ala Arg Gln Tyr Tyr Thr Lys Gly Asn Leu Val Arg  
260 265 270  
Ile Cys Leu Gly Ala Val Ile Leu Ile Ile Leu Ala Gly Phe Leu Ala  
275 280 285  
Glu Asp Trp His Ser Arg Arg Lys Arg Leu Arg His Arg Gly Arg Ala  
290 295 300  
Val Gln Arg Pro Leu Pro Pro Leu Pro Pro Leu Pro Gln Thr Arg Lys  
305 310 315 320  
Ser His Gly Gly Gln Asp Gly Gly Arg Gln Asp Val His Ser Arg Gly  
325 330 335  
Leu Cys Ser

<210> 39  
<211> 1017  
<212> DNA  
<213> Homo sapiens

<400> 39  
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cagagtggac cgctcccaa gccctccctc caggctctgc ccagctccct ggtgccctg 120  
gagaagccag tgacctccg gtgccaggga cctccgggcg tggacctgta ccgctggag 180  
aagctgagtt ccagcaggta ccaggatcag gcagtcctct tcatcccggc catgaagaga 240  
agtctggctg gacgtaccg ctgctcctac cagaacggaa gcctctggtc cctgcccagc 300  
gaccagctgg agctcggtgc cacgggagtt tttgccaaac cctcgctctc agcccagccc 360  
ggcccgccgg tgtcgtcagg aggggacgta accctacagt gtcagactcg gtatggcttt 420  
gaccaatttg ctctgtacaa ggaaggggac cctgcgccct acaagaatcc cgagagatgg 480  
taccgggcta gtttcccat catcacggtg accgccgcc acagcggaac ctaccgatgc 540  
tacagcttct ccagcaggga cccatacctg tggtcggtcc ccagcgaccc cctggagctt 600

gtggtcacag	gaacctctgt	gacccccagc	cggttaccaa	cagaaccacc	ttcctcggtta	660
gcagaattct	cagaagccac	cgctgaactg	accgtctcat	tcacaaacaa	agtcttcaca	720
actgagactt	ctaggagtat	caccaccagt	ccaaaggagt	cagactctcc	agctggctct	780
gccccgccagt	actacaccaa	gggcaacctg	gtccggatat	gcctcggggc	tgtgatccta	840
ataatcctgg	cggggtttct	ggcagaggac	tggcacagcc	ggaggaaagc	cctgcggcac	900
aggggcaggg	ctgtgcagag	gccgttccg	ccctcgccgc	ccctcccga	gacctggaaa	960
tcacacgggg	gtcaggatgg	aggccgacag	gatgttcaca	gccgcgggtt	atgttca	1017

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<210> 40
<211> 339
<212> PRT
<213> Homo sapiens
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[illegible]

<210>	41
<211>	939
<212>	DNA



Trp His Ser Arg Lys Lys Cys Leu Gln His Arg Met Arg Ala Leu Gln  
 290 295 300  
 Arg Pro Leu Pro Pro Leu Pro Leu Ala  
 305 310

<210> 43  
 <211> 939  
 <212> DNA  
 <213> Mus musculus

<400> 43  
 atgtctccag cctcaccac tttcttctgt attgggctgt gtgtactgca agtgateccaa 60  
 acacagagtg gccactccc caagccttcc ctccaggctc agcccagttc cctgggtaccc 120  
 ctgggtcagt cagttattct gaggtgccag ggacctccag atgtggattt atategctg 180  
 gagaaactga aaccggagaa gtatgaagat caagactttc tcttcattcc aaccatggaa 240  
 agaagtaatg ctggacggtg tcatgctct taticagaatg ggagtcactg gtctctccca 300  
 agtgaccagc ttgagctaag tgctacaggt gtgtatgcta aaccctcact ctcatgctcat 360  
 cccagctcag cagtcctca aggcaggat gtgactctga agtgccagag cccatacagt 420  
 tttgatgaat tctgtctata caaagaagg gatactgggc cttataagag acctgagaaa 480  
 tggtagcggg tcaatttccc catcatcaca gtgactgctg ctcatagtg gacgtaccgg 540  
 gtgtacagt tctccagctc atctccatac ctgtgggtcag ccccgagtga cctctagt 600  
 cttgtgggta ctggactctc tgccactccc agccagggtac ccacggaaga atcatttcc 660  
 gtgacagaat cctccaggag accttccatc ttaccacaaa acaaaatata tacaactgaa 720  
 aagcctatga atatactgc ctctccagag gggctgagcc ctccaattgg tttgtctcat 780  
 cagcactatg ccaaggggaa tctgggtccg atatgccttg gtgccacgat tataataatt 840  
 ttgttggggc ttctagcaga ggattggcac agtcggaaga aatgcctgca acacaggatg 900  
 agagctttgc aaaggccact accaccctc cactggcc 939

<210> 44  
 <211> 313  
 <212> PRT  
 <213> Mus musculus

<400> 44  
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 Ala Gln Pro Ser Ser Leu Val Pro Leu Gly Gln Ser Val Ile Leu Arg  
 35 40 45  
 Cys Gln Gly Pro Pro Asp Val Asp Leu Tyr Arg Leu Glu Lys Leu Lys  
 50 55 60  
 Pro Glu Lys Tyr Glu Asp Gln Asp Phe Leu Phe Ile Pro Thr Met Glu  
 65 70 75 80  
 Arg Ser Asn Ala Gly Arg Tyr Arg Cys Ser Tyr Gln Asn Gly Ser His  
 85 90 95  
 Trp Ser Leu Pro Ser Asp Gln Leu Glu Leu Ile Ala Thr Gly Val Tyr  
 100 105 110  
 Ala Lys Pro Ser Leu Ser Ala His Pro Ser Ser Ala Val Pro Gln Gly  
 115 120 125  
 Arg Asp Val Thr Leu Lys Cys Gln Ser Pro Tyr Ser Phe Asp Glu Phe  
 130 135 140  
 Val Leu Tyr Lys Glu Gly Asp Thr Gly Pro Tyr Lys Arg Pro Glu Lys  
 145 150 155 160  
 Trp Tyr Arg Val Asn Phe Pro Ile Ile Thr Val Thr Ala Ala His Ser  
 165 170 175  
 Gly Thr Tyr Arg Cys Tyr Ser Phe Ser Ser Ser Pro Tyr Leu Trp  
 180 185 190  
 Ser Ala Pro Ser Asp Pro Leu Val Leu Val Val Thr Gly Leu Ser Ala  
 195 200 205  
 Thr Pro Ser Gln Val Pro Thr Glu Glu Ser Phe Pro Val Thr Glu Ser  
 210 215 220

[illegible]

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<210> 45
<211> 939
<212> DNA
<213> Mus musculus
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<400> 45						
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ctgggtcagt	cagttatttc	gaggtgccag	ggacctccag	atgtggattt	atatcgcttg	180
gagaaactga	aaccggagaa	gtatgaagat	caagactttc	tcttcattcc	aaccatggaa	240
agaagtaatg	ctggacggta	tcgatgctct	tatcagaatg	ggagtcactg	gtctctccca	300
agtgaccagc	ttgagctaatt	tgtacaggt	gtgtatgcta	aacctcact	ctcagctcat	360
cccagctcag	cagcccctca	aggcagggat	gtgactctga	agtgccagag	ccatacagt	420
tttgatgaat	tcgtttctata	caaagaaggg	gatactgggc	cttataagag	acctgagaaa	480
tggtagaccgg	ccaattttccc	catcatcaca	gtgactgtcg	ctcacagttg	gacgtaccgg	540
tgttacaggct	ttctcagctc	atctccatac	ctgtggtcag	ccccagatga	ccctctagtg	600
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gtgacagaat	cctccaggag	acctttccatc	ttaccacaaa	acaaaatatc	tacaactgaa	720
aagcctatga	atatcactgc	ctctccagag	gggctgagcc	ctccaattgg	ttttgctcat	780
cagcactatg	ccaaggggaa	tctggtccgg	atatgccttg	gtgccacgat	tataataatt	840
ttgttggggc	ttctagcaga	ggattggcac	agtcggaaga	aatgcctgca	acacaggatg	900
aqagctttgc	aaaggccact	accacccttc	ccactggcc			939

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<210> 46
<211> 313
<212> PRT
<213> Mus musculus
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			20					25					30			
Ala	Gln	Pro	Ser	Ser	Leu	Val	Pro	Leu	Gly	Gln	Ser	Val	Ile	Leu	Arg	
			35				40					45				
Cys	Gln	Gly	Pro	Pro	Asp	Val	Asp	Leu	Tyr	Arg	Leu	Glu	Lys	Leu	Lys	
						55					60					
Pro	Glu	Lys	Tyr	Glu	Asp	Gln	Asp	Phe	Leu	Phe	Ile	Pro	Thr	Met	Glu	
65					70					75				80		
Arg	Ser	Asn	Ala	Gly	Arg	Tyr	Arg	Cys	Ser	Tyr	Gln	Asn	Gly	Ser	His	
				85					90					95		
Trp	Ser	Leu	Pro	Ser	Asp	Gln	Leu	Glu	Leu	Ile	Ala	Thr	Gly	Val	Tyr	
			100					105					110			
Ala	Lys	Pro	Ser	Leu	Ser	Ala	His	Pro	Ser	Ser	Ala	Ala	Pro	Gln	Gly	
			115				120					125				
Arg	Asp	Val	Thr	Leu	Lys	Cys	Gln	Ser	Pro	Tyr	Ser	Phe	Asp	Glu	Phe	
			130			135					140					
Val	Leu	Tyr	Lys	Glu	Gly	Asp	Thr	Gly	Pro	Tyr	Lys	Arg	Pro	Glu	Lys	
145					150					155					160	

Trp	Tyr	Arg	Ala	Asn 165	Phe	Pro	Ile	Ile	Thr 170	Val	Thr	Ala	Ala	His 175	Ser
Gly	Thr	Tyr	Arg	Cys 180	Tyr	Ser	Phe	Ser 185	Ser	Ser	Ser	Pro	Tyr	Leu	Trp
Ser	Ala	Pro	Ser	Asp 195	Pro	Leu	Val 200	Leu	Val	Val	Thr	Gly 205	Leu	Ser	Ala
Thr	Pro 210	Ser	Gln	Val	Pro	Thr 215	Glu	Glu	Ser	Phe	Pro 220	Val	Thr	Glu	Ser
Ser 225	Arg	Arg	Pro	Ser	Ile 230	Leu	Pro	Thr	Asn	Lys 235	Ile	Ser	Thr	Thr	Glu
Lys	Pro	Met	Asn	Ile 245	Thr	Ala	Ser	Pro	Glu 250	Gly	Leu	Ser	Pro	Pro 255	Ile
Gly	Phe	Ala	His 260	Gln	His	Tyr	Ala	Lys 265	Gly	Asn	Leu	Val	Arg 270	Ile	Cys
Leu	Gly	Ala	Thr 275	Ile	Ile	Ile	Ile 280	Leu	Leu	Gly	Leu	Leu 285	Ala	Glu	Asp
Trp	His 290	Ser	Arg	Lys	Lys	Cys 295	Leu	Gln	His	Arg	Met 300	Arg	Ala	Leu	Gln
Arg 305	Pro	Leu	Pro	Pro	Leu 310	Pro	Leu	Ala							

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<210> 47
<211> 939
<212> DNA
<213> Mus musculus
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agaagtaatg	ctggacggta	tcgatgctct	tatcagaatg	ggagtcactg	gtctctccca	300
agtgaccagc	ttgagcta	tgctacaggt	gtgtatgcta	aacctcact	ctcagctcat	360
cccagctcag	cagtcctca	aggcagggat	gtgactctga	agtgccagag	cccatacagt	420
tttgatgaat	tcgttctata	caaagaaggg	gatactgggc	cttataagag	acctgagaaa	480
tggtaaccgg	ccaatttccc	catcatcaca	gtgactgctg	ctcacagtgg	gacgtaccgg	540
tgttacagct	ctccagctc	atctccatac	ctgtggtcag	ccccagatga	ccctctagtgt	600
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aagcctatga	atatcactgc	ctctccagag	gggctgagcc	ctccaattgg	ttttgctcat	780
cagcactatg	tcaaggggaa	tctggtccgg	atatgccttg	gtgccacgat	tataataatt	840
tttgttgggg	ttctagcaga	ggattggcac	agtcggaaga	aatgcctgca	acacaggatg	900
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<211> 313
<212> PRT
<213> Mus musculus
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Gln	Val	Ile	Gln	Thr	Gln	Ser	Gly	Pro	Leu	Pro	Lys	Pro	Ser	Leu	Gln
			20					25					30		
Ala	Gln	Pro	Ser	Ser	Leu	Val	Pro	Leu	Gly	Gln	Ser	Val	Ile	Leu	Arg
		35					40					45			
Cys	Gln	Gly	Pro	Pro	Asp	Val	Asp	Leu	Tyr	Arg	Leu	Glu	Lys	Leu	Lys
	50					55					60				
Pro	Glu	Lys	Tyr	Glu	Asp	Gln	Asp	Phe	Leu	Phe	Ile	Pro	Thr	Met	Glu
65					70					75					80
Arg	Ser	Asn	Ala	Gly	Arg	Tyr	Arg	Cys	Ser	Tyr	Gln	Asn	Gly	Ser	His
				85					90					95	

Trp Ser Leu Pro Ser Asp Gln Leu Glu Leu Ile Ala Thr Gly Val Tyr  
 100 105 110  
 Ala Lys Pro Ser Leu Ser Ala His Pro Ser Ser Ala Val Pro Gln Gly  
 115 120 125  
 Arg Asp Val Thr Leu Lys Cys Gln Ser Pro Tyr Ser Phe Asp Glu Phe  
 130 135 140  
 Val Leu Tyr Lys Glu Gly Asp Thr Gly Pro Tyr Lys Arg Pro Glu Lys  
 145 150 155 160  
 Trp Tyr Arg Ala Asn Phe Pro Ile Ile Thr Val Thr Ala Ala His Ser  
 165 170 175  
 Gly Thr Tyr Arg Cys Tyr Ser Phe Ser Ser Ser Ser Pro Tyr Leu Trp  
 180 185 190  
 Ser Ala Pro Ser Asp Pro Leu Val Leu Val Val Thr Gly Leu Ser Ala  
 195 200 205  
 Thr Pro Ser Gln Val Pro Thr Glu Glu Ser Phe Pro Val Thr Glu Ser  
 210 215 220  
 Ser Arg Arg Pro Ser Ile Leu Pro Thr Asn Lys Ile Ser Thr Thr Glu  
 225 230 235 240  
 Lys Pro Met Asn Ile Thr Ala Ser Pro Glu Gly Leu Ser Pro Pro Ile  
 245 250 255  
 Gly Phe Ala His Gln His Tyr Val Lys Gly Asn Leu Val Arg Ile Cys  
 260 265 270  
 Leu Gly Ala Thr Ile Ile Ile Ile Leu Leu Gly Leu Leu Ala Glu Asp  
 275 280 285  
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<400> 49  
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<210> 51  
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<212> PRT  
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<210> 68  
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<400> 68  
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Gly

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<400> 69  
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<400> 70  
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1 5 10

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<400> 71  
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<400> 72

